

SEQUENCE LISTING

<110> Walke, D. Wade
Hu, Yi
Nepomnichy, Boris
Turner, C. Alexander Jr
Zambrowicz, Brian

<120> Novel Human Kinases and Polynucleotides Encoding the Same

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 Gln Lys His Lys Gln Ala His Gln Thr Pro Glu Lys Arg Val Asn Thr
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 195 200 205
 Gly Gly Ser Gly Glu Val Lys Ala Pro Phe Leu Gly Ser Gly Gly Thr
 210 215 220
 Ile Ala Pro Ser Ser Phe Ser Ser Arg Gly Gln Tyr Glu His Tyr His
 225 230 235 240
 Ala Ile Phe Asp Gln Met Gln Gln Gln Arg Ala Glu Asp Asn Glu Ala
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 Lys Trp Lys Arg Glu Ile Tyr Gly Arg Gly Leu Pro Glu Arg Gln Lys
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Ser Pro Glu Glu Ser Phe Ala Phe Arg Ser His Ser His Leu Pro Pro	770	775	780
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				665						670								
				670														

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Gln	Leu	Val	Ile	Pro	Leu	Asp	Glu	Leu	Thr	Leu	Asp	Thr	Ser	Phe	Ser
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Thr	Thr	Glu	Arg	His	Thr	Val	Gly	Glu	Val	Ile	Lys	Leu	Gly	Pro	Asn
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Lys	Ile	Leu	Gly	Glu	Ala	Glu	Leu	Gln	Leu	Gln	Thr	Glu	Leu	Leu	Glu
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Pro	Leu	Ile	Thr	Gly	Glu	Lys	Lys	Val	Gln	Cys	Ile	Ser	His	Glu	Ile
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		865			870					875					880
Ser	Glu	Glu	Lys	Glu	Thr	Lys	Glu	Thr	Gln	Ser	Ala	Asp	Arg	Ile	Thr
			885					890						895	
Ile	Gln	Glu	Asn	Glu	Val	Ser	Glu	Asp	Gly	Val	Ser	Ser	Thr	Val	Asp
			900				905						910		
Gln	Leu	Ser	Asp	Ile	His	Ile	Glu	Pro	Gly	Thr	Asn	Asp	Ser	Gln	His
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Ser	Lys	Cys	Asp	Val	Asp	Lys	Ser	Val	Gln	Pro	Glu	Pro	Phe	Phe	His
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Lys	Val	Val	His	Ser	Glu	His	Leu	Asn	Leu	Val	Pro	Gln	Val	Gln	Ser
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Val	Gln	Cys	Ser	Pro	Glu	Glu	Ser	Phe	Ala	Phe	Arg	Ser	His	Ser	His
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Thr	Gly	Leu	Phe	Asp	Ala	Asn	Asn	Pro	Lys	Met	Leu	Arg	Thr	Cys	Ser
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Glu	Asn	Ile	Lys	Glu	Gly	Pro	Ser	Asp	Ser	Glu	Asp	Ile	Val	Phe	Glu
			1045					1050						1055	
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Leu	Arg	Glu	Gln	Pro	Gly	Glu	Glu	Tyr	Ser	Glu	Glu	Glu	Glu	Ser	Val
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Leu	Lys	Asn	Ser	Asp	Val	Glu	Pro	Thr	Ala	Asn	Gly	Thr	Asp	Val	Ala
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Asp	Glu	Asp	Asp	Asn	Pro	Ser	Ser	Glu	Ser	Ala	Leu	Asn	Glu	Glu	Trp
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Ser	Val	Phe	Asn	His	Leu	Glu	Glu	Leu	Arg	Leu	His	Leu	Glu	Gln	Glu
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Met	Gly	Phe	Glu	Lys	Phe	Phe	Glu	Val	Tyr	Glu	Lys	Ile	Lys	Ala	Ile
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His	Glu	Asp	Glu	Asp	Glu	Asn	Ile	Glu	Ile	Cys	Ser	Lys	Ile	Val	Gln

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 Lys Arg Asn Pro Arg Asp Arg Pro Ser Val Asn Ser Ile Leu Glu Lys
 35 40 45
 Gly Phe Ile Ala Lys Arg Ile Glu Lys Phe Leu Ser Pro Gln Leu Ile
 50 55 60
 Ala Glu Glu Phe Cys Leu Lys Thr Phe Ser Lys Phe Gly Ser Gln Pro
 65 70 75 80
 Ile Pro Ala Lys Arg Pro Ala Ser Gly Gln Asn Ser Ile Ser Val Met
 85 90 95
 Pro Ala Gln Lys Ile Thr Lys Pro Ala Ala Lys Tyr Gly Ile Pro Leu
 100 105 110
 Ala Tyr Lys Lys Tyr Gly Asp Lys Lys Leu His Glu Lys Lys Pro Leu
 115 120 125
 Gln Lys His Lys Gln Ala His Gln Thr Pro Glu Lys Arg Val Asn Thr
 130 135 140
 Gly Glu Glu Arg Arg Lys Ile Ser Glu Glu Ala Ala Arg Lys Arg Arg
 145 150 155 160
 Leu Glu Phe Ile Glu Lys Glu Lys Lys Gln Lys Asp Gln Ile Ile Ser
 165 170 175
 Leu Met Lys Ala Glu Gln Met Lys Arg Gln Glu Lys Glu Arg Leu Glu
 180 185 190
 Arg Ile Asn Arg Ala Arg Glu Gln Gly Trp Arg Asn Val Leu Ser Ala
 195 200 205
 Gly Gly Ser Gly Glu Val Lys Ala Pro Phe Leu Gly Ser Gly Gly Thr
 210 215 220
 Ile Ala Pro Ser Ser Phe Ser Ser Arg Gly Gln Tyr Glu His Tyr His
 225 230 235 240
 Ala Ile Phe Asp Gln Met Gln Gln Gln Arg Ala Glu Asp Asn Glu Ala
 245 250 255
 Lys Trp Lys Arg Glu Ile Tyr Gly Arg Gly Leu Pro Glu Arg Gln Lys
 260 265 270
 Gly Gln Leu Ala Val Glu Arg Ala Lys Gln Val Glu Glu Phe Leu Gln
 275 280 285
 Arg Lys Arg Glu Ala Met Gln Asn Lys Ala Arg Ala Glu Gly His Met
 290 295 300
 Val Tyr Leu Ala Arg Leu Arg Gln Ile Arg Leu Gln Asn Phe Asn Glu
 305 310 315 320
 Arg Gln Gln Ile Lys Ala Lys Leu Arg Gly Glu Lys Lys Glu Ala Asn
 325 330 335
 His Ser Glu Gly Gln Glu Gly Ser Glu Glu Ala Asp Met Arg Arg Lys
 340 345 350
 Lys Ile Glu Ser Leu Lys Ala His Ala Asn Ala Arg Ala Val Leu
 355 360 365
 Lys Glu Gln Leu Glu Arg Lys Arg Lys Glu Ala Tyr Glu Arg Glu Lys
 370 375 380
 Lys Val Trp Glu Glu His Leu Val Ala Lys Gly Val Lys Ser Ser Asp
 385 390 395 400
 Val Ser Pro Pro Leu Gly Gln His Glu Thr Gly Gly Ser Pro Ser Lys
 405 410 415
 Gln Gln Met Arg Ser Val Ile Ser Val Thr Ser Ala Leu Lys Glu Val
 420 425 430
 Gly Val Asp Ser Ser Leu Thr Asp Thr Arg Glu Thr Ser Glu Glu Met
 435 440 445
 Gln Lys Thr Asn Asn Ala Ile Ser Ser Lys Arg Glu Ile Leu Arg Arg

Ile His Glu Asp Glu Asp Glu Asn Ile Glu Ile Cys Ser Lys Ile Val
 965 970 975
 Gln Asn Ile Leu Gly Asn Glu His Gln His Leu Tyr Ala Lys Ile Leu
 980 985 990
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 995 1000 1005

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 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175
 Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr

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225	230	235
Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe		
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Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp		
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Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile		
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Pro Ser Lys His Phe Gln Glu Arg		
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Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp	
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Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile	
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Pro Ser Lys His Phe Gln Glu Arg	
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 <212> PRT
 <213> homo sapiens

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 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175
 Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser
 305 310 315

<210> 13
 <211> 285
 <212> DNA
 <213> homo sapiens

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 atgagccaag atgatgcaac ttggtggcaa gcgaaacacg aagctgatgc caaccaccagg 180
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<210> 14
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 <212> PRT
 <213> homo sapiens

<400> 14

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Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
35 40 45
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
50 55 60
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
65 70 75 80
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser
85 90
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<210> 15

<211> 327

<212> DNA

<213> homo sapiens

<400> 15

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gcaagaagaa gccaggagag tgaatggtgtt gaatacattt tcatttccaa gcatttggttt 180
gagacagatg tacaaaaataa caagttttatt gaatatggag aatataaaaa caactactac 240
ggcacaagta tagactcagt tcggtctgtc cttgctaaaa acaagtttg ttgtgtggat 300
gttcagcttc atgtaagtaa acaatga 327
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<211> 108

<212> PRT

<213> homo sapiens

<400> 16

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20 25 30
Val Thr Val Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp
35 40 45
Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val
50 55 60
Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr
65 70 75 80
Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val
85 90 95
Cys Leu Leu Asp Val Gln Pro His Val Ser Lys Gln
100 105
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<210> 17

<211> 1128

<212> DNA

<213> homo sapiens

<400> 17

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atgttttggtg aaaaaagcct gcatttcattg gtaaaagattc atgaaaaact acactactact 180
gagaagcaga gtccggtgcc cattctccat ggtgcggcgg ccttggccga tgatctggcc 240
gaagagcttc agaacaagcc attaaacagt gagatcagag agctgttgaa actactgtca 300
aaacccaatg tgaaggcttt gctctctgta catgatactg tggctcagaa gaattacgac 360
ccagctgttc cctctatgcc tgaagatatt gacgatgagg aagactcagt aaaaataatc 420
cgctcgggtca aaaaatagaga accactggga gctaccatta agaagtagta acagaccggg 480
gcgatcattg tggccagaat catgagagga ggagctgcag atagaagtgg tcttattcat 540
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gttggtagtg aacttaggga agtcaacggg ataccagtgg aggataaaag gcctgaggaa 600
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 cctaattagg ataaggcaat tccatgtaag gaagctgggc tttctttcaa aaagggagat 780
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 agaagaagtt ttctgtcttag tagaaaaagat aagaaaaaca ataattccat gtatgaatgc 1020
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<210> 18

<211> 375

<212> PRT

<213> homo sapiens

<400> 18

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 Leu Leu Ala Ala Leu Pro Ala Gln Leu Gln Pro His Val Asp Ser Gln
 20 25 30
 Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Leu Lys Ser Leu His
 35 40 45
 Ser Leu Val Lys Ile His Gly Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175
 Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 305 310 315 320
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 325 330 335
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
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 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 355 360 365

Arg Leu Val Val Leu Val Ala
370 375

<210> 19
<211> 414
<212> DNA
<213> homo sapiens

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	gtgggagtag	ggctgaatga	actgaaacga	aagctgctga	tcagtgacac	ccagcactact	180
	ggcgggacag	tgccccatgc	caccagagca	agaagaagcc	aggagagtag	tggtgttgtaa	240
	tacattttca	ttttcaagca	tttgtttgag	acagatgtac	aaaataacaa	gtttattgaa	300
	ttgggagaa	ataaaaaaaa	ctactacggc	acaagtatat	actcagttcg	gtctgtccct	360
	gctaaaaaca	aagtttgttt	gttggatggt	cagcctcatg	taagtaaaca	atga	414

<210> 20
<211> 137
<212> PRT
<213> homo sapiens

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	Thr	Tyr	Glu	Glu	Val	Thr	Pro	Tyr	Arg	Arg	Gln	Thr	Asn	Glu	Lys	Tyr
				20					25					30		
	Arg	Leu	Val	Val	Leu	Val	Gly	Pro	Val	Gly	Val	Gly	Leu	Asn	Glu	Leu
				35					40				45			
	Lys	Arg	Lys	Leu	Leu	Ile	Ser	Asp	Thr	Gln	His	Tyr	Gly	Val	Thr	Val
				50					55				60			
	Pro	His	Thr	Thr	Arg	Ala	Arg	Arg	Ser	Gln	Glu	Ser	Asp	Gly	Val	Glu
	65					70					75					80
	Tyr	Ile	Phe	Ile	Ser	Lys	His	Leu	Phe	Glu	Thr	Asp	Val	Gln	Asn	Asn
				85						90					95	
	Lys	Phe	Ile	Glu	Tyr	Gly	Glu	Tyr	Lys	Asn	Asn	Tyr	Tyr	Gly	Thr	Ser
				100					105					110		
	Ile	Asp	Ser	Val	Arg	Ser	Val	Leu	Ala	Lys	Asn	Lys	Val	Cys	Leu	Leu
				115					120					125		
	Asp	Val	Gln	Pro	His	Val	Ser	Lys	Gln							
				130				135								

<210> 21
<211> 1422
<212> DNA
<213> homo sapiens

<400> 21	atgccagctt	tgctaacggg	atctggggagt	gacactgggtc	tgtatgagct	gttggctgct	60
	ctgccagccc	agctgcagcc	acatgtggat	agccagggaag	acctgacctt	ccctctgggat	120
	atgttttggt	aaaaaaagcct	gcatttcattg	gtaaaagattc	atgaaaaaact	acactactact	180
	gagaagcaga	gtcccgtggcc	cattctccat	ggctgcggcgg	ccctggccgga	tgatctggcc	240
	gaagagcttc	agaacaagcc	attaaacagt	gagatcacag	agctgttgaa	actactgtca	300
	aaacccaatg	tgaaggcttt	gctctctgta	catgatactg	tggtctcagaa	gaattacgac	360
	ccagtggtgc	ctccatgtgc	tgaagatatt	gacgatgagg	aagactcagt	aaaaataatc	420
	cgctctggta	aaaatagaga	accactggga	gctaccatta	agaaggatga	acagaccggg	480
	gcgatcattg	tgccagagaat	catgagagga	ggagctgcag	atagaagtgg	tcttattcat	540
	gttgggtggt	aacttaggga	agtcacagg	ataccagtgg	aggataaaaag	gcttgaggaa	600
	ataatcacga	ttttggctca	gtctcaggga	gcaattacat	ttaagattat	accggcgagc	660
	aaagaggaga	caccatcaaa	agaaggcaag	atgtttatca	aagccctctt	tgactataat	720
	cctaagtagg	ataaggccaat	tccatgttaag	gaagctgggg	ttcttttcaa	aaaggggagat	780
	attcttcaga	ttatgagcca	agatgatgca	acttggtggc	aagcgaacaa	cgaagctgat	840
	gccaaaccca	gggcaggcct	gatccccctca	aagcattttcc	aggaaaggag	attggctttg	900

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 aagaagagtg atcagtacga cacagctgac gtacccacat acgaagaagt gacaccgtat 1080
 cggcgacaaa ctaattgaaaa atacagactc gttgtcttgg ttggtcccg gggagtaggg 1140
 ctgaatgaac tgaacgaaaa gctgctgac agtgacacc agcactatgg cgtgacagtg 1200
 ccccatacca ccagagcaag aagaagccag gagagtgatg gttgtgaata cattttcatt 1260
 tccaagcatt ttgttgagac agatgtacaa aataacaagt ttattgaata tgagagaatat 1320
 aaaaacaact actacggcac aagtatagac tcagttcgtg ctgtccttgc taaaaacaaa 1380
 gttgtttgtg ttgatgttca gcctcatgta agtaaacaat ga 1422

<210> 22
 <211> 473
 <212> PRT
 <213> homo sapiens

<400> 22
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 Leu Leu Ala Ala Leu Pro Ala Gln Leu Gln Pro His Val Asp Ser Gln
 20 25 30
 Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Glu Lys Ser Leu His
 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175
 Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 305 310 315 320
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 325 330 335
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 340 345 350
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 355 360 365
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu

370 375 380
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 385 390 395 400
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 405 410 415
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 420 425 430
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 435 440 445
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 450 455 460
 Asp Val Gln Pro His Val Ser Lys Gln
 465 470

<210> 23
 <211> 750
 <212> DNA
 <213> homo sapiens

<400> 23
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 aaggcaattc catgtaagga agctgggctt tctttcaaaa agggagatat tcttcagatt 120
 atgagccaaag atgatgcaac ttgggtggcaa gcgaaacacg aagctgatgc caaccccagg 180
 gcaggcttga tcccccaaa gcattttccag gaaaggagat tggcttttag acgaccaggaa 240
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 cgtcttagta gaaaagataa gaaaacaaat aaatccatgt atgaatgcaa gaagagtgat 360
 cagtagcaca cagctgacgt acccacatac gaagaagtga caccgtatcg gcgacaaact 420
 aatgaaaaat acagactcgt tgtcttgggt ggtcccgtgg gagtagggct gaatgaactg 480
 aaacgaagac tgctgatcag tgacacccag cactatggcg tgacagtgcc ccataccacc 540
 agagcaagaa gaagccagga gactgatggt gttgaatata ttttcatttc caagcatttg 600
 tttagagcag atgtacaaaa taacaagttt attgaatatg gagaatataa aaacaactac 660
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 gatgttcagc ctcatgtaag taaacaatga 750

<210> 24
 <211> 249
 <212> PRT
 <213> homo sapiens

<400> 24
 Met Lys Leu Phe Phe Gln Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
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 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 20 25 30
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 35 40 45
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 50 55 60
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 65 70 75 80
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 85 90 95
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 100 105 110
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 115 120 125
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 130 135 140
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 145 150 155 160
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 165 170 175
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu

180 185 190
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 195 200 205
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 210 215 220
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 225 230 235 240
 Asp Val Gln Pro His Val Ser Lys Gln
 245

<210> 25
 <211> 468
 <212> DNA
 <213> homo sapiens

<400> 25
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 gcaagaagaa gccaggagag tgatgggtgtt gaatacattt tcatttccaa gcattgtgtt 180
 gagacagatg tacaaaaata caagtttatt gaatatggag aatataaaaa caactactac 240
 ggcaacaagta tagactcagt tgggtctgtc cttgtctaaa acaagttttg ttgtgttgat 300
 gtccagcctc atacagttaa gcatttaagg acactagaat ttaagcccta tgtgatattt 360
 ataaagctc catcaataga gcgtttgaga gaaacaagaa aaaatgcaaa gattatttca 420
 agcagagatg accaagggtc tgcaaaaccc ttcacacaag gagaatag 468

<210> 26
 <211> 155
 <212> PRT
 <213> homo sapiens

<400> 26
 Met Cys Cys Pro Lys Thr Ala Cys Arg Gly Pro Val Gly Val Gly Leu
 1 5 10 15
 Asn Glu Leu Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly
 20 25 30
 Val Thr Val Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp
 35 40 45
 Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val
 50 55 60
 Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr
 65 70 75 80
 Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val
 85 90 95
 Cys Leu Leu Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu
 100 105 110
 Glu Phe Lys Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg
 115 120 125
 Leu Arg Glu Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp
 130 135 140
 Gln Gly Ala Ala Lys Pro Phe Thr Gln Gly Glu
 145 150 155

<210> 27
 <211> 555
 <212> DNA
 <213> homo sapiens

<400> 27
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 gtgacacagt atcgcgagca aactaatgaa aaatacagac tcgttgtctt ggttggtccc 120
 gtgggagtag ggctgaatga actgaaacga aagctgctga tcagtgcac ccagcactat 180
 ggctgacag tgccccatac caccagagca agaagaagcc aggagagtga tgggtttgaa 240
 tacattttca ttccaagca tttgttttag acagatgtac aaaaatacaa gttttattgaa 300

tatggagaat	ataaaaaa	ctactacggc	acaagtatag	actcagttcg	gtctgtcctt	360
gctaaaaaca	aagtttgttt	gttggatggt	cagctcata	cagtgaagca	tttaaggaca	420
ctagaattta	agccctatgt	gatatttata	aagcctccat	caatagagcg	tttgagagaa	480
acaagaaaaa	atgcaaatg	tatttcaagc	agagatgacc	aaggtgctgc	aaaacccttc	540
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<210> 28
 <211> 184
 <212> PRT
 <213> homo sapiens

<400> 28
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 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 20 25 30
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 35 40 45
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 50 55 60
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 65 70 75 80
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 85 90 95
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 100 105 110
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 115 120 125
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 130 135 140
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 145 150 155 160
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 165 170 175
 Ala Lys Pro Phe Thr Gln Gly Glu
 180

<210> 29
 <211> 1563
 <212> DNA
 <213> homo sapiens

<400> 29
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 atgttttggtg aaaaaagcct gcatttcatt gtaaaagattc atgaaaaact acactactat 180
 gagaagcaga gctccgggtgcc cattctccat ggtgcggcgcc ccttgccgga tgactctggcc 240
 gaagagcttc agaacaagct attaaacagt gagatcagag agctggtgaa actactgtca 300
 aaacccaatt tgaaggcttt gctctctgta catgatactg ttggtcagaa gaattacgac 360
 ccagcttggtg cctccatggc tgaagatatt gacgatgagg aagactcagt aaaaataatc 420
 cgtctgggtca aaaatagaga accactggga gctaccatta agaaggatga acagaccggg 480
 gcgatcattt tggccagaat catgagagga ggagctgcag atagaagtgg tcttattcat 540
 gttgggtgat aacttaggga agtcaacggg ataccagtg aggataaaag gcttgaggaa 600
 ataatacaga ttttggctca gtctcagggg gcaattacat ttaagattat acccggcagc 660
 aaagaggaga caccatcaaa agaaggcaag atgtttatca aagccctctt tgactataat 720
 cctaattgagg ataaggcaat tccatgtaag gaagctgggc ttcttttcaa aaaggggagat 780
 attcttctaga ttatgagcca agatgatgca acttggtggc aagcgaaaca cgaagctgat 840
 gccaaaccca gggcaggctt gatccctca aagcatttcc aggaaaggag attggtcttg 900
 agacgaccag aaatatgtgt tcagcccctg aaagtgttcca acaggaaatc atctgggttt 960
 agaagaagtt ttcgtcttag taagaaaagt aagaaaaaca ataaatccat gtatgaatgc 1020
 aagaagagtg atcagtagca cacagctgac gtaccacat acgaagaagt gacaccgat 1080
 cggcgacaaa ctaatgaaa atacagactc gttgtcttgg ttggtccctg gggagtaggg 1140
 ctgaatgaac tgaacagaaa gctgctgac agtgacacc agcactatgg cgtgacagtg 1200

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tccaagcatt	tgtttgagac	agatgtacaa	aataacaagt	ttattgaata	tgagagaata	1320
aaaaacaact	actacggcac	aagtatagac	tcagtctcgt	ctgtcccttg	taaaaacaaa	1380
gtttgtttgt	tggtatgttca	gcctcataca	gtgaagcatt	taaggacact	agaatttaag	1440
ccctatgtga	tatttataaa	gcctccatca	atagagcggt	tgagagaaac	aagaaaaaat	1500
gcaaagatta	tttcaagcag	agatgaccaa	ggtgctgcaa	aacccttcac	acaaggagaa	1560
tag						1563

<210> 30
 <211> 520
 <212> PRT
 <213> homo sapiens

<400> 30

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Leu	Leu	Ala	Ala	Leu	Pro	Ala	Gln	Leu	Gln	Pro	His	Val	Asp	Ser	Gln
			20					25					30		
Glu	Asp	Leu	Thr	Phe	Leu	Trp	Asp	Met	Phe	Gly	Glu	Lys	Ser	Leu	His
		35					40				45				
Ser	Leu	Val	Lys	Ile	His	Glu	Lys	Leu	His	Tyr	Tyr	Glu	Lys	Gln	Ser
		50				55					60				
Pro	Val	Pro	Ile	Leu	His	Gly	Ala	Ala	Ala	Leu	Ala	Asp	Asp	Leu	Ala
		65			70				75					80	
Glu	Glu	Leu	Gln	Asn	Lys	Pro	Leu	Asn	Ser	Glu	Ile	Arg	Glu	Leu	Leu
			85					90					95		
Lys	Leu	Leu	Ser	Lys	Pro	Asn	Val	Lys	Ala	Leu	Leu	Ser	Val	His	Asp
			100					105					110		
Thr	Val	Ala	Gln	Lys	Asn	Tyr	Asp	Pro	Val	Leu	Pro	Pro	Met	Pro	Glu
		115					120					125			
Asp	Ile	Asp	Asp	Glu	Glu	Asp	Ser	Val	Lys	Ile	Ile	Arg	Leu	Val	Lys
		130				135					140				
Asn	Arg	Glu	Pro	Leu	Gly	Ala	Thr	Ile	Lys	Lys	Asp	Glu	Gln	Thr	Gly
		145			150					155					160
Ala	Ile	Ile	Val	Ala	Arg	Ile	Met	Arg	Gly	Gly	Ala	Ala	Asp	Arg	Ser
			165					170					175		
Gly	Leu	Ile	His	Val	Gly	Asp	Glu	Leu	Arg	Glu	Val	Asn	Gly	Ile	Pro
		180					185						190		
Val	Glu	Asp	Lys	Arg	Pro	Glu	Glu	Ile	Ile	Gln	Ile	Leu	Ala	Gln	Ser
		195					200					205			
Gln	Gly	Ala	Ile	Thr	Phe	Lys	Ile	Ile	Pro	Gly	Ser	Lys	Glu	Glu	Thr
		210				215						220			
Pro	Ser	Lys	Glu	Gly	Lys	Met	Phe	Ile	Lys	Ala	Leu	Phe	Asp	Tyr	Asn
		225			230				235						240
Pro	Asn	Glu	Asp	Lys	Ala	Ile	Pro	Cys	Lys	Glu	Ala	Gly	Leu	Ser	Phe
			245						250				255		
Lys	Lys	Gly	Asp	Ile	Leu	Gln	Ile	Met	Ser	Gln	Asp	Asp	Ala	Thr	Trp
		260						265					270		
Trp	Gln	Ala	Lys	His	Glu	Ala	Asp	Ala	Asn	Pro	Arg	Ala	Gly	Leu	Ile
		275				280						285			
Pro	Ser	Lys	His	Phe	Gln	Glu	Arg	Arg	Leu	Ala	Leu	Arg	Arg	Pro	Glu
		290				295					300				
Ile	Leu	Val	Gln	Pro	Leu	Lys	Val	Ser	Asn	Arg	Lys	Ser	Ser	Gly	Phe
		305			310				315					320	
Arg	Arg	Ser	Phe	Arg	Leu	Ser	Arg	Lys	Asp	Lys	Lys	Thr	Asn	Lys	Ser
			325					330					335		
Met	Tyr	Glu	Cys	Lys	Lys	Ser	Asp	Gln	Tyr	Asp	Thr	Ala	Asp	Val	Pro
			340					345					350		
Thr	Tyr	Glu	Glu	Val	Thr	Pro	Tyr	Arg	Arg	Gln	Thr	Asn	Glu	Lys	Tyr
		355					360					365			
Arg	Leu	Val	Val	Leu	Val	Gly	Pro	Val	Gly	Val	Gly	Leu	Asn	Glu	Leu
		370				375					380				
Lys	Arg	Lys	Leu	Leu	Ile	Ser	Asp	Thr	Gln	His	Tyr	Gly	Val	Thr	Val

385					390					395				400
Pro	His	Thr	Thr	Arg	Ala	Arg	Arg	Ser	Gln	Glu	Ser	Asp	Gly	Val
				405					410					415
Tyr	Ile	Phe	Ile	Ser	Lys	His	Leu	Phe	Glu	Thr	Asp	Val	Gln	Asn
			420					425						430
Lys	Phe	Ile	Glu	Tyr	Gly	Glu	Tyr	Lys	Asn	Asn	Tyr	Tyr	Gly	Thr
		435					440					445		
Ile	Asp	Ser	Val	Arg	Ser	Val	Leu	Ala	Lys	Asn	Lys	Val	Cys	Leu
	450					455					460			
Asp	Val	Gln	Pro	His	Thr	Val	Lys	His	Leu	Arg	Thr	Leu	Glu	Phe
	465				470					475				480
Pro	Tyr	Val	Ile	Phe	Ile	Lys	Pro	Pro	Ser	Ile	Glu	Arg	Leu	Arg
			485						490					495
Thr	Arg	Lys	Asn	Ala	Lys	Ile	Ile	Ser	Ser	Arg	Asp	Asp	Gln	Gly
		500					505							510
Ala	Lys	Pro	Pro	Phe	Thr	Gln	Gly	Glu						
		515					520							

<210> 31
 <211> 891
 <212> DNA
 <213> homo sapiens

<400> 31																			
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aaggcaattc	catgtaagga	agctgggctt	tctttcaaaa	aggagagat	tcttccagatt														120
atgagccaag	atgatgcaac	ttgggtggcaa	gcgaaacacg	aagctgatgc	caaccocagg														180
gcaggcttga	tccccctcaa	gcattttccag	gaaaggagat	tggtctttgag	acgaccaggaa														240
atatgtgttc	agcccttgaa	agttttccaac	aggaatcat	ctgggttttag	aagaagtgttt														300
cgcttttagta	gaaaagataa	gaaaacaaat	aaatccatgt	atggaatgcaa	gaagagtgtat														360
cagtagcacaca	cagctgcagct	accacacatac	gaagaagtga	caccgtatgc	gcgacaaaact														420
aatgaaaaat	acagactcgt	tgtcttgggt	gggtcccggtg	gagtagggct	gaatgaactg														480
aaacgaaaag	tgctgatcag	tgacacccag	cactatggcg	tgacagtgc	ccatcacacc														540
agagcaagaa	gaagccaggga	gagtgatggt	gttgaataca	ttttcatttc	caagcatttg														600
tttgagacag	atgtacaaaa	taacaagtgt	attgaatatg	gagaatataa	aaacaactac														660
tacggccaaa	gtatagactc	agttcggtct	gtccttgcta	aaaacaaagt	ttgtttgtgt														720
gatgttcagc	ctcatcacgt	gaagcattta	aggacactag	aatttaagcc	ctatgtgata														780
tttataaagc	ctccatcaat	agagcgtttg	agagaaacaa	gaaaaaatgc	aaagattatt														840
tcaagcagag	atgaccaagg	tgctgcaaaa	cccttcacac	aaggagaata	g														891

<210> 32
 <211> 296
 <212> PRT
 <213> homo sapiens

<400> 32																			
Met	Lys	Leu	Phe	Phe	Gln	Met	Phe	Ile	Lys	Ala	Leu	Phe	Asp	Tyr	Asn				
1				5					10				15						
Pro	Asn	Glu	Asp	Lys	Ala	Ile	Pro	Cys	Lys	Glu	Ala	Gly	Leu	Ser	Phe				
			20					25					30						
Lys	Lys	Gly	Asp	Ile	Leu	Gln	Ile	Met	Ser	Gln	Asp	Asp	Ala	Thr	Trp				
		35					40					45							
Trp	Gln	Ala	Lys	His	Glu	Ala	Asp	Ala	Asn	Pro	Arg	Ala	Gly	Leu	Ile				
	50					55					60								
Pro	Ser	Lys	His	Phe	Gln	Glu	Arg	Arg	Leu	Ala	Leu	Arg	Arg	Pro	Glu				
	65				70					75					80				
Ile	Leu	Val	Gln	Pro	Leu	Lys	Val	Ser	Asn	Arg	Lys	Ser	Ser	Gly	Phe				
			85						90					95					
Arg	Arg	Ser	Phe	Arg	Leu	Ser	Arg	Lys	Asp	Lys	Lys	Thr	Asn	Lys	Ser				
			100					105					110						
Met	Tyr	Glu	Cys	Lys	Lys	Ser	Asp	Gln	Tyr	Asp	Thr	Ala	Asp	Val	Pro				
		115					120					125							
Thr	Tyr	Glu	Glu	Val	Thr	Pro	Tyr	Arg	Arg	Gln	Thr	Asn	Glu	Lys	Tyr				

130 135 140
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 145 150 155 160
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 165 170 175
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 180 185 190
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 195 200 205
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 210 215 220
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 225 230 235 240
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 245 250 255
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 260 265 270
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 275 280 285
 Ala Lys Pro Phe Thr Gln Gly Glu
 290 295

<210> 33
 <211> 585
 <212> DNA
 <213> homo sapiens

<400> 33
 atgtgctgcc caaagactgc ttgcagaggt cccgtgggag tagggctgaa tgaactgaaa 60
 cgaagctgctg tgatcagtga caccagcac tatggcgtga cagtgcacca taccaccaga 120
 gcaagaagaa gccaggagag tgatgggtgtt gaatacattt tcatttccaa gcatttgttt 180
 gagacagatg tacaaaaata caagtttatt gaatatggag aatataaaaa caactactac 240
 ggcacaagta tagactcagt tcggctctgtc cttgctaaaa acaagtttgg ttgtgtggat 300
 gtacagcctc atacagttaa gcatttaaag acactagaat ttaagcccta tgtgatattt 360
 ataaagcctc catcaataga gcgtttgaga gaaacaagaa aaatgcaaa gattatttca 420
 agcagagatg accaagggtg tgcaaaaccc ttcacagaag aagattttca agaaatgatt 480
 aaatctgcac agataatgga aagtcaatat ggctatcttt ttgacaaaaa tataataaat 540
 gatgacctca ctgtggcatt caaaaaaaaaa aaaaaaaaaa aaaaaa 585

<210> 34
 <211> 195
 <212> PRT
 <213> homo sapiens

<400> 34
 Met Cys Cys Pro Lys Thr Ala Cys Arg Gly Pro Val Gly Val Gly Leu
 1 5 10 15
 Asn Glu Leu Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly
 20 25 30
 Val Thr Val Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp
 35 40 45
 Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val
 50 55 60
 Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr
 65 70 75 80
 Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val
 85 90 95
 Cys Leu Leu Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu
 100 105 110
 Glu Phe Lys Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg
 115 120 125
 Leu Arg Glu Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp
 130 135 140

Gln Gly Ala Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile
 145 150 155 160
 Lys Ser Ala Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys
 165 170 175
 Ile Ile Ile Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys
 180 185 190
 Lys Lys Lys
 195

<210> 35
 <211> 672
 <212> DNA
 <213> homo sapiens

<400> 35
 atgtatgaat gcaagaagag tgatcagtag gacacagctg acgtaccocac atacgaagaa 60
 gtgacaccgt atcgggcgaca aactaatgaa aaatacacagac tcgttgtctt ggttggtccc 120
 gtgggagtag ggctgaatga actgaaacga aagctgctga tcagtgcacac ccagcactat 180
 ggctgtgacag tgccccatcac caccagagca agaagaagcc aggagagtga tgggtgtgaa 240
 tacattttca tttccaagca tttgtttgag acagatgtac aaaaatacaaa gtttattgaa 300
 tatggagaat ataaaaacaa ctactacggc acaagtatag actcagttcg gtcgtctctt 360
 gctaaaaaca aagttttgtt gttggatggt cagcctcata cagtgaagca ttttaaggaca 420
 ctagaattta agccctatgt gatattata aagcctccat caatagagcg tttgagagaa 480
 caaagaaaaa atgcaaagat tatttcaagc agagatgacc aaggtgctgc aaaacccctt 540
 acagaagaag attttcaaga aatgattaaa tctgcacaga taatggaaa tcaataggt 600
 catctttttg acaaaattat aataaatgat gacctcactg tggcattcaa aaaaaaaaaa 660
 aaaaaaaaaa aa 672

<210> 36
 <211> 224
 <212> PRT
 <213> homo sapiens

<400> 36
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 1 5 10 15
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 20 25 30
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 35 40 45
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Thr Gly Val Thr Val
 50 55 60
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 65 70 75 80
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 85 90 95
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 100 105 110
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 115 120 125
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 130 135 140
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 145 150 155 160
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 165 170 175
 Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 180 185 190
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
 195 200 205
 Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys Lys Lys Lys
 210 215 220

<210> 37
 <211> 1680
 <212> DNA
 <213> homo sapiens

<400> 37
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 ctgccagccc agctgcagcc acatgtggat agccaggaag acctgacctt cctctgggat 120
 atgttttggtg aaaaaagcct gcattcattg gtaaaagattc atgaaaaact acactactat 180
 gagaagcaga gtccgggtgcc cttctcccat ggtgcggcgg ccttgcccga tgactctggcc 240
 gaagagcttc agaaacaaggc attaaacagt gagatcagag agctgttgaa actactgtca 300
 aaaccacatg tgaaggcttt gctctctgtga catgatactg tggctcagaa gaattacgac 360
 ccagtggtgc ctcttatgcc tgaagatat tgaagtaggg aagactcagt aaaaaataatc 420
 cgtcttggtca aaaaatagaga accactggga gctaccatta agaagtagta acagaccggg 480
 gcgatacttg tggccagaat catgagagga ggagctgcag atagaagtgg tcttatctcat 540
 gttggtgatg aacttaggga agtcaacggg ataccagtg aggataaaa gcttagaggaa 600
 ataatacaga ttttgggtcca gtctcaggga gcaattacat ttaagattat acccgcgagc 660
 aaagaggaga caccatcaaaa agaaggcaag atgtttatca aagccctctt tgactataat 720
 cctatgagg ataaggcaat tccatgtaag gaagctgggc tttctttcaa aaaggagat 780
 attcttcaga ttatgagcca agatgatgca acttggtggc aagcgaaca cgaagctgat 840
 gccaacccca gggcaggctt gatccctcca aagcatttcc aggaaggagg attggctttg 900
 agacgaccag aatatattggt tcagccctgt aaagtttcca acaggaatc atctggtttt 960
 agaagaattt ttcgtcttag tagaaaagat aagaaaaaca ataaatccat gtatgaatgc 1020
 aagaagagtg atcagtagca cacagctgac gtacccacat acgaagaagt gcacacgcat 1080
 cgccgcacaaa ctaagtgaata atacagactc gtgtgtctgg ttggtccgtg ggagtagggg 1140
 ctgaatgaac tgaacgcaaa gctgctgac agtgacacc agcactatgg cgtgacagtg 1200
 cccatcaata ccagagcaag aagaagccag gagagtgatg gtgttgaata cattttcatt 1260
 tccaagcatt tttgtgagac agatgtacaa aataacaagt ttatgtaata tggagaatat 1320
 aaaaacaact actacggcac aagtatagac tcaagttcgt ctgctcttgc taaaacaaca 1380
 gttttgttgg tggatgttca gctcatata gtgaagcatt taaggacact agaatttaag 1440
 cccatgtgta tatttataaa gctccatca atagagcgtt tggagagaac agaaaaaat 1500
 gcaaagatta tttaacgac agatgaccaa ggtgctgcaa aacccttca agaagaagat 1560
 tttcaagaaa tgattaaatc tgcacagata atggaagtc aatatgtgca tctttttgac 1620
 aaaattataa taaatgatga cctcactgtg gcattcaaaa aaaaaaaaaa aaaaaaaaaa 1680

<210> 38
 <211> 560
 <212> PRT
 <213> homo sapiens

<400> 38
 Met Pro Ala Leu Ser Thr Gly Ser Gly Ser Asp Thr Gly Leu Tyr Glu
 1 5 10 15
 Leu Leu Ala Ala Leu Pro Ala Gln Leu Gln Pro His Val Asp Ser Gln
 20 25 30
 Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Glu Lys Ser Leu His
 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175

Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 305 310 315 320
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 325 330 335
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 340 345 350
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 355 360 365
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 370 375 380
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 385 390 395 400
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 405 410 415
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 420 425 430
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 435 440 445
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 450 455 460
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 465 470 475 480
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 485 490 495
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Gln Gly Ala
 500 505 510
 Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 515 520 525
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
 530 535 540
 Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys Lys Lys
 545 550 555 560

<210> 39
 <211> 1008
 <212> DNA
 <213> homo sapiens

<400> 39
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 aaggcaattc catgtaagga agctgggctt tctttcaaaa agggagatat tcttcagatt 120
 atgagccaaag atgatgcaac ttggtggcaa gcgaacacag aagctgatgc caacccagg 180
 gcaggtctga tcccccaaa gcatcttcag gaaaggagat tggctttgag acgaccaggaa 240
 atattgggttc agccctgtaa agtttccaac aggaatcat ctggttttag aagaagtgttt 300
 cgtcttagta gaaaagataa gaaaacaataa aaatccatgt atgaatgcaa gaagagtgtat 360
 cagtaacaca cagctgacgt acccacatac gaagaagtga caccgtatcg gcgacaaact 420
 aatgaaaaat acagactcgt tgtcttgggt ggtcccgtgg gagtagggct gaatgaactg 480

aaacgaaagc tgctgatcag tgacacccag cactatggcg tgacagtgcc ccataccacc 540
 agagcaagaa gaagccaggga gagtgatggg gttgaataca ttttcatttc caagcatttg 600
 tttgagacag atgtacaaaa taacaagttt attgaatatg gagaataataa aaacaactac 660
 tacggcacaaa gtatagactc agttcgggtc gtccttgcta aaaacaaagt ttgtttgttg 720
 gatgttcacg ctcatcacagt gaagcattta aggacacatg aatttaagcc ctatgtgata 780
 tttataaagc ctccatcaat agagcggttg agagaaacaa gaaaaaatgc aaagattatt 840
 tcaagcagag atgaccaagg tgctgcaaaa ccccttcacg aagaagattt tcaagaaatg 900
 attaaattcg cacagataat ggaaagtcaa tatggtcatc tttttgacaa aattataata 960
 aatgatgacc tcactgtggc attcaaaaaa aaaaaaaaaa aaaaaaaaaa 1008

<210> 40
 <211> 336
 <212> PRT
 <213> homo sapiens

<400> 40
 Met Lys Leu Phe Phe Gln Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 1 5 10 15
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 20 25 30
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 35 40 45
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 50 55 60
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 65 70 75 80
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 85 90 95
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 100 105 110
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 115 120 125
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 130 135 140
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 145 150 155 160
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 165 170 175
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 180 185 190
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 195 200 205
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 210 215 220
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 225 230 235 240
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 245 250 255
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 260 265 270
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asn Gln Gly Ala
 275 280 285
 Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 290 295 300
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
 305 310 315 320
 Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys Lys Lys
 325 330 335

<210> 41
 <211> 636
 <212> DNA
 <213> homo sapiens

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<400> 41
atgtgctgcc caaagactgc ttgcagaggt cccgtgggag tagggctgaa tgaactgaaa 60
cgaaagctgc tgatcagatga caccagcagc tatggcgatga cagtgcccac taccaccaga 120
gcaagaagaa gccaggagag tgatgggtgtt gaatacatatt tcattttcaa gcatttggtt 180
gagacagatg tacaaaaataa caagttttatt gaatatggag aataataaaa caactactac 240
ggcacaagta tatactcagt tcgggtctgtc cttgctaaaa acaaaagtgtt ttgttggat 300
gttcagcctc atacagttaa gcatttaagg acactagaat ttaagcccta tgtgatattt 360
ataaagcctc catcaataga gcgttttga gaaacaagaa aaaaagccta gattatttca 420
agcagagatg accaaggtgc tgcaaaaccc ttcacagaag aagattttca agaaatgatt 480
aaatctgcac agataatgga aagtcaatat ggtcatcttt ttgacaaaat tataataaat 540
gatgacctca ctgtggcatt caatgagctc aaaacaactt ttgacaaaat agagacagag 600
accattggg tgccagtgag ctggttacct tcataa 636

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<210> 42
<211> 211
<212> PRT
<213> homo sapiens

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<400> 42
Met Cys Cys Pro Lys Thr Ala Cys Arg Gly Pro Val Gly Val Gly Leu
1 5 10 15
Asn Glu Leu Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly
20 25 30
Val Thr Val Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp
35 40 45
Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val
50 55 60
Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr
65 70 75 80
Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val
85 90 95
Cys Leu Leu Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu
100 105 110
Glu Phe Lys Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg
115 120 125
Leu Arg Glu Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp
130 135 140
Gln Gly Ala Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile
145 150 155 160
Lys Ser Ala Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys
165 170 175
Ile Ile Ile Asn Asp Asp Leu Thr Val Ala Phe Asn Glu Leu Lys Thr
180 185 190
Thr Phe Asp Lys Leu Glu Thr Glu Thr His Trp Val Pro Val Ser Trp
195 200 205
Leu His Ser
210

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<210> 43
<211> 723
<212> DNA
<213> homo sapiens

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<400> 43
atgtatgaat gcaagaagag tgatcagtag gacacagctg acgtaccac atacgaagaa 60
gtgacacggt atcgcgagaca aactaatgaa aaatacacag acgtgtgtctt ggttgggtccc 120
gtgggagtag ggctgaatga actgaaacga aagctgctga tcagtgacac ccagcactat 180
ggcgtgacag tgcccatac caccagagca agaagaagcc aggagagtgga tgggtgtgaa 240
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<210> 44
 <211> 240
 <212> PRT
 <213> homo sapiens

<400> 44

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Arg	Leu	Val	Val	Leu	Val	Gly	Pro	Val	Gly	Val	Gly	Leu	Asn	Glu	Leu
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Lys	Arg	Lys	Leu	Leu	Ile	Ser	Asp	Thr	Gln	His	Tyr	Gly	Val	Thr	Val
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Pro	His	Thr	Thr	Arg	Ala	Arg	Arg	Ser	Gln	Glu	Ser	Asp	Gly	Val	Glu
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Tyr	Ile	Phe	Ile	Ser	Lys	His	Leu	Phe	Glu	Thr	Asp	Val	Gln	Asn	Asn
			85					90					95		
Lys	Phe	Ile	Glu	Tyr	Gly	Glu	Tyr	Lys	Asn	Asn	Tyr	Tyr	Gly	Thr	Ser
		100						105					110		
Ile	Asp	Ser	Val	Arg	Ser	Val	Leu	Ala	Lys	Asn	Lys	Val	Cys	Leu	Leu
		115					120					125			
Asp	Val	Gln	Pro	His	Thr	Val	Lys	His	Leu	Arg	Thr	Leu	Glu	Phe	Lys
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Pro	Tyr	Val	Ile	Phe	Ile	Lys	Pro	Pro	Ser	Ile	Glu	Arg	Leu	Arg	Glu
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Thr	Arg	Lys	Asn	Ala	Lys	Ile	Ile	Ser	Ser	Arg	Asp	Asp	Gln	Gly	Ala
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Ala	Lys	Pro	Phe	Thr	Glu	Glu	Asp	Phe	Gln	Glu	Met	Ile	Lys	Ser	Ala
		180						185					190		
Gln	Ile	Met	Glu	Ser	Gln	Tyr	Gly	His	Leu	Phe	Asp	Lys	Ile	Ile	Ile
		195					200					205			
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225					230					235					240

<210> 45
 <211> 1731
 <212> DNA
 <213> homo sapiens

<400> 45

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<210> 46
<211> 576
<212> PRT
<213> homo sapiens

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35 40 45
Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
50 55 60
Pro Val Pro Ile Leu His Gly Ala Ala Leu Ala Asp Asp Leu Ala
65 70 75 80
Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
85 90 95
Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
100 105 110
Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
115 120 125
Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
130 135 140
Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
145 150 155 160
Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
165 170 175
Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
180 185 190
Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
195 200 205
Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
210 215 220
Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
225 230 235 240
Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
245 250 255
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
260 265 270
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
275 280 285
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
290 295 300
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
305 310 315 320
Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
325 330 335

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 385 390 400
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
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 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
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 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
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 465 470 475
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
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 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 500 505 510
 Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 515 520 525
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
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<210> 47
 <211> 1059
 <212> DNA
 <213> homo sapiens

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<210> 48
 <211> 352
 <212> PRT
 <213> homo sapiens

<400> 48
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Lys Lys Gly Asp	Ile Leu Gln Ile	Met Ser Gln Asp	Asp Ala Thr Trp
35	40	45	
Trp Gln Ala Lys His	Glu Ala Asp	Ala Asn Pro Arg Ala Gly	Leu Ile
50	55	60	
Pro Ser Lys His Phe	Gln Glu Arg	Arg Leu Ala Leu Arg Arg	Pro Glu
65	70	75	80
Ile Leu Val Gln Pro	Leu Lys Val Ser	Asn Arg Lys Ser Ser	Gly Phe
85	90	95	
Arg Arg Ser Phe Arg	Leu Ser Arg	Lys Asp Lys Lys Thr	Asn Lys Ser
100	105	110	
Met Tyr Glu Cys Lys	Lys Ser Asp Gln Tyr	Asp Thr Ala Asp Val	Pro
115	120	125	
Thr Tyr Glu Glu Val	Thr Pro Tyr Arg Arg	Gln Thr Asn Glu Lys	Tyr
130	135	140	
Arg Leu Val Val Leu	Val Gly Pro Val Gly	Val Gly Leu Asn Glu	Leu
145	150	155	160
Lys Arg Lys Leu Leu	Ile Ser Asp Thr	Gln His Tyr Gly Val	Thr Val
165	170	175	
Pro His Thr Thr Arg	Ala Arg Arg	Ser Gln Glu Ser Asp	Gly Val Glu
180	185	190	
Tyr Ile Phe Ile Ser	Lys His Leu Phe	Glu Thr Asp Val	Gln Asn Asn
195	200	205	
Lys Phe Ile Glu Tyr	Gly Glu Tyr Lys	Asn Asn Tyr Tyr	Gly Thr Ser
210	215	220	
Ile Asp Ser Val Arg	Ser Val Leu Ala Lys	Asn Lys Val Cys	Leu Leu
225	230	235	240
Asp Val Gln Pro His	Thr Val Lys His	Leu Arg Thr Leu	Glu Phe Lys
245	250	255	
Pro Tyr Val Ile Phe	Ile Lys Pro Pro	Ser Ile Glu Arg	Leu Arg Glu
260	265	270	
Thr Arg Lys Asn Ala	Lys Ile Ser Ser	Arg Asp Asp Gln	Gly Ala
275	280	285	
Ala Lys Pro Phe Thr	Glu Glu Asp Phe	Gln Glu Met Ile	Lys Ser Ala
290	295	300	
Gln Ile Met Glu Ser	Gln Tyr Gly His	Leu Phe Asp Lys	Ile Ile Ile
305	310	315	320
Asn Asp Asp Leu Thr	Val Ala Phe Asn	Glu Leu Lys Thr	Thr Phe Asp
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<210> 49
 <211> 1906
 <212> DNA
 <213> homo sapiens

<400> 49	
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 <213> homo sapiens

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